INSTITUTION OF CIVIL ENGINEERS.—At the opening meeting, January 9, Mr. Joshua Field, president, in the chair, the paper read was "A Description of the improved Forms of Water-wheels," by Mr. William Fairbairn. After noticing the opportunity for improvement afforded by the substitution of cast and wrought iron for timber, in the construction of hydraulic machines, the author pointed out the disadvantages and loss of power attending the principle and the form of the old water-wheels, which disadvantages had induced him to adopt the construction described in the paper, and which he termed "The Ventilating Water-Wheel." The general object of these modifications was to prevent the condensation of the air, and to permit its escape during the filling of the bucket with water, as also its re-admission during the discharge of the water into the lower mill-race. These wheels were described to possess advantages beyond the overshot, the undershot, or the common breast wheels, and were best adapted for falls not exceeding eighteen or twenty feet, and where at times there was a considerable depth of back water. The wheel had a close sole, the tail ends of the buckets were turned up at a distance of two inches from the back of the sole plate, and running parallel with it, terminated within about two inches of the bend of the bucket, immediately above it. The water, in entering the bucket, drove the air out by the aperture into the space behind, and thence into the bucket above, and so on in succession. The converse occurred when the buckets were emptied, as the air was enabled to flow in as fast as the wheel arrived at such a position as to permit the water to escape.

ARCHITECTURE IN OXFORD.—The *Oxford Herald* mentions various architectural improvements with which the liberality of the university, of particular colleges, or of individuals, as well by the restoration of ancient buildings as by the erection of new ones, has lately adorned Alma Mater. One is the restoration of St. Mary's the Virgin, under the directions of Mr. Blore, at an expense which they think cannot be short of 3,000*l.* In the cathedral church, from the nave two cumbrous pews have been ousted, and their places supplied by low and massive oaken benches, the carving on their standards designed to harmonise with the massive Romanesque architecture of that portion of the cathedral. The principal and fellows of "the King's Hall and College of Brasenose" have caused no small portion of the old walls, built originally of the crumbling Headington stone, to be renovated and repaired, that they may hand down their college buildings to their successors in a more perfect state. The new hall of Pembroke-college quandrangle is third pointed, with a tower at the end, and is well spoken of; there are new cemetery chapels, situate respectively in Jericho, Osney, and Holywell. The first of these is "Romanesque," while the two others are of the pointed styles.

SHORT LEASES AND THE LEGACY DUTY.—I am glad to see that, amongst other misconceptions of even the present day, the law of building on leases is likely to be discussed calmly, and, I will venture to say, amended in consequence at no very distant period. What can be a greater injustice than the following:—Society requires healthful places of residences. The lord of a piece of land where such residence is not alone necessary but imperative, lets his land on building leases, not *at its value*, but at a hundred times *its value yearly*,—a building is erected on it, worth, say 1,000*l.*; it is to be the property of the erector for 61 years, taking the city leases for their suburb lands. In 20 years the owner dies and leaves it to a relative, the descendant of his grandfather; as it respects him it is personal property, and he must pay a legacy duty of 6 per cent.—60*l.* In 20 years more he dies, and leaves it also to a relation more distant, and again a legacy duty must be paid of 104*l.*; a further period of 21 years elapses, and in comes the landlord and takes all, stock and block, and the owner may thank his stars if he be not called upon to pay for some dilapidations which the indulgent landlord finds out can be charged according to law. Now, Sir, if a great railway company have a *penchant* for my house or lands, they can take it at such value as a British jury of twelve men on their oaths say it is reasonably worth, although it may be my ruin. Why, then, should not land wanted for building in suitable places not be subject to the like regulations—the well-being and health of people congregated together must surely be of equal moment. The landlord has all along had more than his due: and at length the descendants of the man who has spent 1,000*l.* in building on such freehold land, having paid legacy duty over and over again, find the landlord's descendant in possession of all, and not liable to legacy duty at all, because it is freehold!

Can such things be, and overcome us like
A summer cloud without our special wonder?

Is there any man alive bold enough to take this bull by the horns.—L.

MEETINGS OF SCIENTIFIC BODIES

Held during the ensuing week.

TUESDAY, JAN. 16.—Institution of Civil Engineers, 8 P.M. (anniversary).

WEDNESDAY, 17.—Society of Arts, 8 P.M.

THURSDAY, 18.—Royal Society, 8½ P.M.; Society of Antiquaries, 8 P.M.

TO CORRESPONDENTS.

Received.—"XX.," "D. J.," "C. C.," "M. A." Oxford (we shall use the drawings: they shall be returned when done with), "J. C." (Kilburn), "Lady C.," "J. H. P.," "G. G." (Charing-cross), "G. T." (thanks), "Quondam" (unavoidably postponed), "H. P.," "A. S. S.," "F. G. G." (thanks), "R. F. S.," "W. H.," "J. B.," "F. C. W.," "E. W." (Manchester), "G. M.," "J. G." Hanwell (we will endeavour to obtain the address), "The Architectural Scrap Book," by J. Butler and H. Hodge (15, Beaufort-buildings); "Hints on Cottage Architecture," by Henry Weaver, architect (H. Pope, Budge-row, London); "Report to the Town Council of Chester on the Sewerage and other Works," by the Borough Surveyor, Mr. Baylis.

ADVERTISEMENTS.

ROYAL POLYTECHNIC INSTITUTION.—Lectures on the Cultivation of the Voice, and on the Art of Singing, by G. Gifford, Esq., with various illustrations, on Tuesday, Thursday, and Saturday, at Two o'clock, and on the alternate evenings, at Eight; on the Electric Light, by Dr. Bachhoffner, on Tuesday, Thursday, and Saturday evenings; on Chemistry, by Dr. Ryan with brilliant experiments, daily, and on alternate evenings. Calide's Phantasmagoria, with curious new effects, Monday, Wednesday, and Friday, at Two, and on the alternate evenings. New Series of Dissolving Views. New Chromatrope. Microscope. Diver and Diving Bell. Working Models explained. The Music is directed by Dr. Walba.—Admission, 1s.; Schools, half-price.

TO ARCHITECTS.—COMPETITION AND OTHER DRAWINGS.

MR. THOMAS S. BOYS, Member of the New Society of Painters in Water Colours, and author of "The Picturesque Architecture of Paris, Ghent, Rouen, &c.," and of "London as it is," offers his services in Finishing Backgrounds, Landscapes, Perspective Views, Interiors, &c. From the long experience he has had in such subjects, he is fully aware of the points essentially necessary to be attended to. Drawings and designs lithographed in a superior manner.—Address, Mr. BOYS, 61, Great Titchfield-street, Oxford-street.

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